Masthead Logo

Latham Science Communication Project

4-1-2018

Spectrum S.T.E.A.M.

Anjah Droe
University of Iowa

Narrative

I was raised by a father who always wanted to do the right thing. A few years ago, he, with the help of my mother, started a program at the University of Northern Iowa called the Spectrum Project. The Spectrum Project began as a series of music activities for children with autism and has since grown into a semester of rehearsals full of dance, theater, and visual art as well as music for children with any disability, their friends and family, or any kid that wants to join. I was a freshman in high school when the Spectrum Project first started, but I didn't come to appreciate exactly how much my family had done for the often-overlooked children in my hometown until close to graduation. I took my inspiration for Spectrum S.T.E.A.M from my father, who is constantly looking for the forgotten people around us and extending opportunities to them. I hoped that offering interesting science and art activities to children with autism in the Iowa City area would help to quell the ableism often seen in these fields and promote the idea among these children and their families that the sciences and arts are valid interests for everybody regardless of ability.

The process of starting Spectrum S.T.E.A.M. began with emails to Jessie Witherell and Dina Bishara from the Iowa City Autism Community and science education professor Mark McDermott of the University of Iowa College of Education. These contacts led to a partnership with the Iowa City Autism Community (ICAC), which turned out to be essential for the implementation of this project. Through the ICAC I was able to advertise the events to over 300 individuals, either with autism or family of people with autism, in Iowa City and Coralville. Without this advertising opportunity I would never have been able to recruit participants for Spectrum S.T.E.A.M. In addition, Dina and Jessie provided extremely helpful feedback on designing autism-friendly activities as well as feedback on various marketing materials such as posters and social media advertisements.

At the first day of Spectrum S.T.E.A.M., we learned about astronomy through visual art. Activities included looking at pictures from books checked out from the Sciences Library to

make solar objects out of model magic, making moon sand out of flour and oil then making moons, and using star wheels to find interesting constellations that were then drawn with glow-in-the-dark art supplies on black construction paper. The second day of Spectrum S.T.E.AM. was focused on learning about engineering through music, and music through engineering. Children got to blow on soda bottle "organ" and use a spoon to play on the water glass "xylophone," all while discussing why some bottles and glasses had a higher or lower pitch than others. Other kids had fun making basic musical instruments out of straws (panpipes) and shoeboxes (guitars). Towards the end of the day, we looked at the patterns that different frequencies of sound can make in sand.

The first day that we met was also the day of a winter storm; very likely because of this, seven of the eight families that had signed up did not come and we only had one participant to work with. However, that one participant seemed to have a wonderful time, and so we decided to push ahead with the second day. For the second day, we had ten children (six families) show up, and while it was a little hectic, the whole event went smoothly and everybody had a good (and educational) time. My hope is that, in the future, I'll be able to continue Spectrum S.T.E.A.M. and the program will grow to not only bring in more participants but also expand to kids with any disabilities. I think that this is certainly feasible. At the beginning, I thought starting this program would be impossible, but as it turns out, people are more than willing to help get outreach projects like this started. All it takes is some communication, taking initiative, and putting in a lot of work.